REMARKS

The application has been amended and is believed to be in condition for allowance.

The previously-pending claims were rejected under Section 112, second paragraph as indefinite.

The previously-pending claims were also rejected under Section 101 as failing to identify a concrete tangible result.

Claim 1 now recites: a learner-by-learner study menu ... that saves and presents study menu to a learner concerning a subject to be studied, a study material link information database that ... stores study material in the subject to be studied, and the learner-by-learner study menu generation server has a function of 2) presenting to the learner, in a time-distributed manner, each of the plural selected study materials. These recitations are believed to satisfy Section 101 as they recite concrete and tangible features of the invention.

Claim 12 recites the learner's inputting a study target level in having learner information registered in a learner database. Registering or storing data in a database is a recitation believed to satisfy Section 101 as they recite concrete and tangible features of the invention.

Claim 13 now recites a storing step. The recited storing step is a recitation believed to satisfy Section 101 as they recite concrete and tangible features of the invention.

Claim 14 recites accessing a study menu Web server via the access server and causing the learner terminal to display a learner schedule of a day. Causing the learner terminal to

display a schedule is a recitation believed to satisfy Section 101 as they recite concrete and tangible features of the invention.

Claims 15-16 have been amended to recite storing steps believed to satisfy Section 101.

Thus, the claims have been amended to remedy the stated bases for rejection. Withdrawal of these rejections is solicited.

The previously-pending claims were rejected under Section 112, first paragraph, as containing subject matter not described in the specification so as to enable one skilled in the art to make and/or use the invention.

More specifically, page 2 paragraph 2 of the Official Action states that the specification does not teach how to make the invention, in that the claims list growth state identification without stating how one goes about identifying a "growth state" or what exactly is a growth state. Although the Official Action refers to "growth state", this is understood to be a typo and intended to refer to "growth stage".

The Official Action further states that the specification fails to teach how one would determine proficiency of study information, study characteristics, and study dependency. The Official Action also refers to a lack of disclosure concerning "determining study items".

Applicants respectfully disagree. The below discussion concerning the originally filed application shows that there is

disclosure of how to make and use the invention. Therefore, the rejection should be withdrawn.

Applicants believe the confusion as to the terms used arises from applicant using terms different from what an American English speaker might normally use.

If an automobile application originates from England, the specification would likely refer to the boot (trunk) and bonnet (hood). The use of these terms, although perhaps not "mainstreet America" terms, would nonetheless be familiar to one of skill and fully satisfy Section 112, first paragraph.

In this application, for example, the specification refers to both "learner" and "student". See, e.g., paragraph [0051] indicating (emphasis added) that Figure 1 is an explanatory diagram showing the configuration of a learner individual study schedule document generating and providing system …. A learner individual study schedule document generating and providing system 2 using a communication network is electrically connected to a student terminal 28 via a communication network 27.

One of skill understands that a learner is a student. In the below remarks, applicants will refer to the learner as "student" but this should not be considered as limiting.

The application also uses the term "characteristic" whereas for the topic of education, an American English speaker might normally use the term "quality" or "trait". However, these terms are synonyms and, as with learner-student, one of skill would understand that "characteristic" is a synonym for quality

and trait. The use of alternative terms that mean the same thing as standard American English satisfies Section 112, first paragraph. One must consider the application as a whole in evaluating what applicants have disclosed and whether Section 112, first paragraph is satisfied.

As to the phrase "study characteristic", see, for example, claims 5-6. Claim 5 recites (emphasis added) "a function of selecting study materials … based on a target level of the learner, a date when the target should be attained, a current degree of proficiency of the learner, and a study characteristic of the learner …." Next, see that claim 6 recites "that the study characteristic of the learner is a characteristic that depends on presence/absence and a degree of interest in what the learner studies, a degree of eagerness of the learner about what the learner studies, a degree of attitude toward study, and suitability for what the learner studies that is determined by genes."

See also paragraph [0021]: "The study characteristic of the learner is a characteristic that depends on presence/absence and a degree of interest in what the learner studies, a degree of eagerness of the learner about what the learner studies, a degree of attitude toward study, and suitability for what the learner studies that is determined by genes." Also see the disclosure concerning Figure 9, i.e., a is the study characteristic that depends on interest, eagerness, attitude, and suitability determined by genes, x is the study time, and b is the degree of proficiency of study at the start of study.

Applicants believe one of skill would know the meanings of the terms "proficiency", "characteristic", and "dependency".

As to "proficiency of study information", one of skill would understand this to mean information concerning the student's proficiency of study, i.e., information concerning the student's study target (study goal). See claims 7 and 8. Claim 7 actually uses the term "degree-of-proficiency-of-study information" so that it is clear that "degree-of-proficiency-of-study" is an adjective phrase that modifies the noun "information". See that claim 8 recites "a degree of proficiency of study".

Applicants point out that a synonym for degree is level. See that paragraph [0062] states that "[a] study target means a degree (level) of proficiency of study that should be reached finally by study. For example, it may be a level to be reached at the end of the first year of a primary school or a level of 700 points or more in a language certification examination." Also see paragraph [0020] disclosing "selecting study materials … according to predetermined selection criteria based on a target level of the learner, a date when the target should be attained, a current degree of proficiency of the learner, and a study characteristic of the learner … ." This describes how well the student has learned the subject matter being studied.

As to the term "study items", the Official Action correctly recognizes that this phrase means items to be studied/learned, e.g., study topics or the subject matter being

studied. Applicants believe that the application does disclose how to determine what each individual is to receive as study items. Note, the requirement under Section 112, first paragraph includes to be concise and to draft the application taking into account the skill level of one of skill. Therefore, there is no requirement to be unnecessarily specific, e.g., applicants may teach how to determine what level of a topic is appropriate for a given student but need not teach how to determine what level of differential equations is appropriate for a student studying differential calculus.

But see that applicants have addressed this in at least paragraph [0064]: "The study item is a small item obtained by breaking down a study purpose into such a stage that specific problems can be generated. For example, it may be one-digit addition or hearing of conversation sentences." See also paragraph [0065].

As to "growth stage", see the specification in general beginning with paragraph [0015]: "An object of the invention is therefore to allow an individual study provider, a teacher, or a guiding person to provide study materials and a study menu suitable for a purpose of study using the Internet by judging a growth stage of a learner based on his scholastic ability and study characteristic."

Attention is directed to paragraph [0039] which identifies Figure 8 as a flowchart relating to student' growth stages in the invention's system. Attention is also directed to

paragraph [0048] which identifies an execution procedure relating to the student's growth stages.

A review of the invention as disclosed may prove useful and is provided below. For ease, reference will be made to the specification using the paragraph numbers that appear in the published application.

In education, individual study according to each student's ability is considered ideal. However, generation of individual study teaching materials is costly. The Internet may enable independent individual study as the Internet enables mutual transmission of text information, figure/photograph information, or sound information, and hence enables bidirectional communication of information necessary for study, see paragraphs [0002-0014].

The present invention allows a teacher, using the Internet, to provide study materials and a study menu by judging a growth stage of a student based on the student's scholastic ability and study characteristics (quality, traits concerning studying), paragraph [0015].

This includes, as per paragraph [0023], using a study history database comprising a student's i) current study schedule, ii) the study progress result, iii) a study characteristic extracted from the study progress result, iv) a current degree of proficiency, v) study time, and vi) study execution process.

Beginning with paragraphs [0051-0052], there is disclosed a student individual study schedule document generating

and providing system 2 electrically connected to a student terminal 28 via a communication network 27.

The system 2 also includes a study menu Web server 26 connected to a learner-by-learner (student-by-student) study menu generation server 25. A student study history database 23, a study material link information database 24, and a study schedule document database 52 are also connected to the study menu generation server 25.

Paragraph [0055] discloses that the study menu generation server 25 selects study materials according to predetermined selection criteria based on a target level of a learner, a date when the target should be attained, a current degree of proficiency of the learner, and a study characteristic of the learner and determining when to present those in a distributed manner. Inputs for this selection includes (paragraph [0056]) the learner database 22 (a database of target study level, a date when the target study level is scheduled to be reached, recent results of the learner, genetic information of the learner, and degree-of-proficiency-of-study information.

Another input to the study menu generation server is (paragraph [0057]) the learner study history database 23 (student's current study schedule, student's study progress, a study characteristic that is extracted from the study progress result, a current degree of proficiency of study, and a study time of each study.

Still another input to the study menu generation server is (paragraph [0061]) the study schedule document database 52

(study materials classified by study targets, study purposes, study items, and effective study processes). Again, paragraph [0062] discloses that study target means a degree (level) of proficiency of study that should be finally reached by the student's study, e.g., reaching a level of 700 points or more in a language certification examination by the end of the first year of a primary school.

Attention is next directed to Figure 2 which is a flowchart for inputting student specific information. See paragraph [0085], disclosing information relating to inputting the learner database a student's study characteristic at the start of study and other data to be used for generating a study schedule. These inputs include (paragraph [0087]) a study target level, a necessary degree of proficiency of study as a study target, and a deadline for reaching the study target.

Paragraphs [0088-0089] disclose inputting the student's current states (the student's name, school, school position, recent results, degree-of-proficiency-of-study information, and genetic information) e.g., having a gene arrangement for forming in advance nerve cell connections in the brain having a high mathematical logic capability).

These inputs allow (paragraph [0090]) the invention to determine the student's initial state in order to generate a study schedule.

Paragraph [0091] begins the disclosure concerning study schedule generation, with reference to Figure 3. The teacher generates schedule documents for various cases in advance by

generating study materials that can be prepared in advance and generates a study menu Web page based on the student's previous input data. The invention creates a database of study materials that are classified by study targets, study purposes, study items, and effective study processes. A study schedule document is generated so that classification can be made by stages that are an initial stage, a second stage, a third stage, and a final stage (described later) in addition to the above categories.

The specification teaches (paragraphs [0095-0099]) extracting 1) the student's "start of study" degree-of-proficiency-of-study information, 2) the study target from the learner database, 3) the student's study characteristic from the learner database, 4) determining basic study items of the learner based on the learner database, and 5) determining an amount of study and a study schedule.

These result in an individual study schedule because study materials are determined based on the study target and a determined study schedule.

Figures 4-6 relate to the student's executing the study program. Note paragraph [0109] discloses the student sending, to the study menu Web server, study results.

Beginning at paragraph [0112] and with reference to Figure 7, see the disclosure concerning the teacher's guidance wherein a study schedule is automatically modified based on the student's study results (e.g., considering whether study results have any abnormality, whether the results reporting date is

different from the preset deadline, and assessing a more effective study method in judging a variation content).

Paragraph [0119] explains that this process makes it possible to follow individual study at each stage and to thereby allow each student to study according to his own characteristic.

Figure 8 relates to the above-discussed study growth stages where the invention provides that there are various student learning growth stages, shown in sequence as an initial stage, a 2nd stage, a 3rd stage, and a final stage prior to completion. Reference is made to the disclosure beginning with paragraph [0122] and Figure 9 which includes a chart showing a relationship between the scholastic ability for establishment of independent study, the study characteristic, and the course of study guidance as well as an independent study transition process.

The invention includes generating a study schedule (as discussed above), but further includes changing the teacher's study guidance as a function of the student's growth stage.

As per paragraph [0123], at this initial growth stage (S50), the student's scholastic ability remains at some level. As for the study characteristic, study effectiveness is high because there are a number of unknown items that the student has not yet learned. In terms of transiting to independent study, the dependency of study is high because of low independency inherent in an individual. At this growth stage, the teacher's study guidance is a presentation method, specifying a study item or a study material.

At the second growth stage (S52), the student's scholastic ability starts to slowly increase because the study time increases. However, the study characteristic decreases because the freshness at the initial stage is lost. In terms of the transition to independent study, the degree of independent study increases to about 50% and the dependency of study decreases. Therefore, a support method is added to the presentation method by advising and motivating (50% each) being added to the presentation of study items and study materials.

At the third stage (S54), scholastic ability continues to increase; however, the study characteristic becomes unstable. In terms of the transition process of independent study, the degree of independent study accounts for about 80%. Therefore, as for the course of study guidance, advising and motivating (support method) play a key role. At a final stage (S56), the scholastic ability as well as the study characteristic increases remarkably, and the transition to completely independent study is made. Therefore, the course of study guidance becomes independent study.

In summary, assessing the student's growth stage allows generating a schedule that progressively reduces the presentation amount according to the student's growth stage in making the transition to independent study.

With reference to the disclosure beginning at paragraph [0129], Figure 9 shows a student's learning curve according to the invention. This curve indicates a degree-of-proficiency-of-study calculation method based on which a

generated study schedule. The degree of proficiency of study "y" is calculated according to y=ax+b, where "a" is the study characteristic that depends on interest, eagerness, attitude, and suitability determined by genes, "x" is the study time, and "b" is the degree of proficiency of study at the start of study. The horizontal axis represents the study time G1 and the vertical axis represents the degree of study proficiency G2. The origin corresponds to the start of study G3. The intercept is the degree of proficiency b at the start of study. A value f of an integral ydx from 0 to x means an amount of study.

Substantive Rejection

The previously pending claims were all rejected as anticipated by COOK 5,727,950.

The amended claims are believed novel and non-obvious.

As per claim 1, COOK is not found to teach or suggest the recited feature of at least the learner-by-learner study menu generation server has a function of 1) selecting plural study materials in the subject to be studied according to predetermined selection criteria based on i) a target learning level for the learner, ii) a date when the target level should be attained by the learner, iii) a current degree of proficiency of the learner in the subject to be studied, and a iv) study characteristic of the learner, and 2) presenting to the learner, in a time-distributed manner, each of the plural selected study materials, the time-distribution being on study growth stage of the learner, the study growth stage being determined as a function of scholastic ability based on study time in the subject, changes in

the study characteristic, and a progress in transitioning to independent study.

In particular, COOK is not found to disclose selecting plural study materials based the combination of i)-iv). COOK is not found to address selecting material based on iii) a current degree of proficiency of the learner in the subject to be studied combined with iv) a study characteristic of the learner.

COOK is also not found to disclose presenting the selected materials, in a time-distributed manner, where the time-distribution being on study growth stage of the learner, the study growth stage being determined as a function of scholastic ability based on study time in the subject, changes in the study characteristic, and a progress in transitioning to independent study.

Therefore, claim 1 is believed patentable.

COOK is not believed to disclose the study characteristic that depends on presence/absence and a degree of interest in what the learner studies, a degree of eagerness of the learner about what the learner studies, a degree of attitude toward study, and suitability for what the learner studies that is determined by genes. No reference to genetics was found in COOK. Therefore, claim 6 is believed patentable.

Although COOK may disclose some of the items recited in claim 7, not all are disclosed and therefore claim 7 is not anticipated. COOK at least is not found to disclose genetic information of the learner, and degree-of-proficiency-of-study information. Therefore, claim 7 is believed patentable.

Not all features of claim 8 are found in COOK, e.g., the learner study history database is formed by a study characteristic that is extracted from the study progress result of the learner, a current degree of proficiency of study, a study time of each study, and a study execution process.

Although COOK discloses providing study materials, the claim 9 recited links are not all found in COOK.

The recitations of claim 10 have not been found in COOK, e.g., a study schedule document database formed by a list of schedule tables in each of which an effective study method for attaining each of study process purposes obtained by breaking down each study purpose is shown in such a manner that study materials are arranged in date order and study order, and is used in selecting a study schedule document of the learner.

As to claim 12, COOK is not found to disclose the recited feature of inputting gene information of the learner.

As to claim 13, COOK is not found to disclose the recited feature of a step of extracting degree-of-proficiency-of-study information of a learner at a start of study from a learner database; and a step of extracting a study characteristic of the learner from the learner database.

As to claim 14, COOK is not found to disclose the recited feature of learner study materials being presented to the learner in a time-distributed manner based on a study growth stage of the learner, the study growth stage being determined as a function of scholastic ability based on study time in the

subject, changes in the study characteristic, and a progress in transitioning to independent study.

As to claim 15, COOK is not found to disclose at least the recited feature of, based on a late result reporting having occurred plural times or report contents having a problem, changing one or a combination of contents of study materials, the study schedule, and the teacher, with the change being stored.

As to claim 16, COOK is not found to disclose at least the recited feature of specific study guidance and the specific conditions recited.

For the above reasons, each of the claims is believed allowable.

Applicants believe that the present application is in condition for allowance and an early indication of the same is respectfully requested.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

YOUNG & THOMPSON

By _____

Roland E. Long, Jr. Reg. No. 41,949
Attorney for Applicants
745 South 23rd Street, Suite 200
Arlington, Virginia 22202
Telephone: (703) 521-2297

REL/lk